AGENDA ITEM IV

PROPOSED LETTER OF INTENT

LOUISIANA STATE UNIVERSITY HEALTH SCIENCE CENTER-NEW ORLEANS

PH.D. IN BIOSTATISTICS

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BACKGROUND INFORMATION

The proposal notes:

> *The proposed degree is an advanced, research-oriented program requiring in-depth study and research in a particular area of emphasis within biostatistics. The core curriculum will include coursework in advanced statistical methods and statistical theory. Additional coursework will include categorical data analysis, survival analysis, multivariate statistics, regression analysis, linear models, generalized linear models, longitudinal data analysis, statistical computing, and sampling. PhD students will also receive training in research ethics, epidemiology, public health, and the design and analysis of clinical trials, as well as hands-on experience in statistical consulting. Advanced coursework in bioinformatics, in which students learn how to apply and develop new advanced statistical methods for the analysis of micro-array, genomic, and proteomic data, will also be available.*

STAFF SUMMARY

1. Appropriateness with the Role, Scope and Mission

The projected program is consistent with and particularly appropriate to the role, scope and mission of the Louisiana State University Health Sciences Center-New Orleans (LSUHSC-NO).

2. Potential for Unnecessary Program Duplication

No similar program exists statewide; hence, unnecessary duplication is not a relevant issue. However, it should be noted that a closely related Ph.D. program in Biometry was terminated by the Board of Regents in 2002 due to low numbers of completers. The proposal notes the following regarding this potential issue:

> *While there is a certain degree of overlap between the proposed PhD in Biostatistics and the former PhD in Biometry, the areas of emphasis will be quite different. The proposed program will focus on the proper application of biostatistical methods and the development of new statistical methodology, especially in the areas of linear and generalized linear models. The PhD program in Biometry was more narrowly focused*

and had a strong emphasis on statistical genetics. The proposed PhD program will be broader than the old program in Biometry; advanced coursework in bioinformatics, which incorporates some elements of statistical genetics, and students will have the opportunity to develop a concentration in bioinformatics within the PhD program if they wish. In addition, because the PhD in Biostatistics will be housed in the LSUHSC School of Public Health, students will have the opportunity to take elective courses in each of the four areas of basic public health knowledge besides Biostatistics: Epidemiology, Environmental Health Sciences, Health Services Administration, and Social and Behavioral Sciences. PhD students in Biostatistics will be encouraged to attend seminars by LSUHSC faculty and visiting speakers in these other areas of public health, as well as attend thesis and dissertation defenses presented by graduate students in these areas. A substantial number of Biostatistics PhD students will receive financial support from funded projects awarded to Principal Investigators who are faculty members in these areas within the School of Public Health. As a result of these exposures to research in other areas of public health, it is anticipated that many of the PhD students in Biostatistics will work on dissertation topics that have direct relevance to public health. Opportunities for collaboration with researchers in public health were generally not available to PhD students in the old Biometry program. Because of these research opportunities in bioinformatics and public health, we believe that the proposed PhD program will have a broader appeal to potential students than did the former PhD in Biometry program, thereby leading to higher enrollment and graduation figures.

The proposed PhD program will also differ from the old Biometry program in that much more intensive recruitment efforts will be undertaken. Based on conversations with two former faculty members in the Department of Biometry and Genetics, the past recruiting efforts for the PhD in Biometry met with only mixed success. These recruitment efforts consisted mainly of mailings to undergraduate mathematics departments in Louisiana, personal visits to a small number of these departments, and a listing in Peterson's Guides. The recruitment efforts in the LSUHSC Biostatistics Program, on the other hand, emphasize the establishment of close personal contact with key personnel in departments of mathematics and other quantitative disciplines in colleges and universities in Louisiana. It is students in these departments that we expect to be our greatest source of PhD students. During our visits to these departments, Biostatistics faculty members met with the primary contact in the department, other interested faculty, and any students who have expressed an interest in graduate work in statistics. Biostatistics faculty members are often invited to present information about our degree programs to students during class or at meetings of student organizations such as math clubs. Once the PhD program is approved, a brochure describing it will be distributed to potential students during these visits. Our most likely sources of students are described in Section C.1, pp. 6-7, below.

Another advantage in recruiting that the proposed program will have over the old Biometry program is the ability of potential students to obtain up-to-date information about degree programs via the Internet. The new website for the LSUHSC SPH went online in March 2004 (http://publichealth.lsuhsc.edu/) and once the PhD in Biostatistics

is approved, it will be featured prominently on this site. Furthermore, the website will be configured to maximize the number of "hits" received from potential students who are looking for PhD degree programs in biostatistics. We believe that by more intensively recruiting PhD students, we will be able to avoid many of the low enrollment and completion problems faced by the former Biometry program.

3. Consistency with Desegregation Statement Agreement/Unnecessary Duplication

The Desegregation Settlement Agreement does not provide for the development of this or any similar degree at a predominantly black institution in Louisiana. No similar program is currently offered by another state institution of higher education; therefore, there is no question of possible unnecessary program duplication. Hence, the staff believes that the proposed Letter of Intent is consistent with mandates of the Agreement.

4. Adherence to Specific Board of Regents Criteria for Funding.

The proposal states the following regarding potential costs and sources of funding:

The only significant additional costs beyond current expenditures to be incurred by the proposed program in the first five years will be for stipends and tuition waivers for the PhD students. (Sources of funding to cover these costs are described in Section C.2.) No additional faculty appointments will be required during the first five years of the program. Current classrooms, conference rooms, office space, and computing facilities will be adequate for this time period. There may be a need to add some statistics and bioinformatics journals and textbooks to the current LSUHSC library holdings, but the associated costs will be minimal.

With regard to meeting Regents funding criteria, the proposal notes:

The proposed program will promote economic development in Louisiana through job placement of its graduates in the emerging biotechnology industries, including pharmaceuticals, gene therapy, cellular technology, genomics, and proteomics. [Further,] the proposed program will be indispensable in the efforts to obtain accreditation for the LSUHSC School of Public Health, as described in Section B.3 above.

STAFF SUMMARY

The staff concludes that the Letter of Intent for the projected Ph. D. program in Biostatistics at the LSUHSC-NO clearly meets three of four requirements of **Academic Affairs Policy 2.4 - Letter of Intent for Projected New Academic Programs**. The only question which remains pertains to a persuasive rationale for additional cost. While the Health Science Center believes that additional costs will only be minimal and that such costs will largely be covered through existing State funding and external resources, without a complete and thorough review of the full program proposal, it is impossible to judge the validity of this claim. If and when the LSUHSC submits a full program proposal, it will be essential that an external review committee of nationally-recognized experts in this field assess the potential for program development and make appropriate recommendations to the Board of Regents.

STAFF RECOMMENDATION

The staff recommends that the Academic and Student Affairs Committee grant conditional approval for the proposed Letter of Intent for a projected Ph.D. in Biostatistics (CIP Code 26.1102) at the Louisiana State University Health Sciences Center-New Orleans.